

DETAILS OF THE WEATHER OF THE MONTH IN THE UNITED STATES.

GENERAL CONDITIONS.

551.506 (73)

By A. J. HENRY.

The period of high temperature in the United States and Canada evidently culminated in the current month with positive departures at individual stations of as much as 10° and 12° F.—a remarkably large abnormality for a summer month. (See Chart IV of this REVIEW.) Drought continued in the Lake region, the Mississippi and Ohio Valleys, and locally in the Middle Atlantic and New England States. The rainfall was in excess of the average in the South Atlantic and East Gulf States, particularly along the Atlantic coast from Wilmington, N. C. to Jacksonville, Fla.

Pressure was slightly above normal in practically all parts of the country, especially over the Canadian Maritime Provinces and the States of Washington and Oregon where the ocean HIGHS seemed to extend their influence over the continent.

CYCLONES AND ANTICYCLONES.

By W. P. DAY, Observer.

Low pressure areas were numerous with frequent developments over the western Plateau region; however, few reached storm intensity and several disintegrated after a short existence.

Pressure was high continuously during the month over the Atlantic Ocean in the vicinity of Bermuda and off the Pacific coast. The North Pacific HIGH frequently invaded the extreme Northwestern States and most of the migratory HIGHS originated there and drifted eastward and southward. None of the high pressure areas charted were important.

Tables showing the number of HIGHS and LOWS by types follow:

Lows.

	Al- berta.	North Pa- cific.	South Pa- cific.	North- ern Rocky Moun- tain.	Colo- rado.	Texas.	East Gulf.	South At- lantic.	Central.	Total.
July, 1921.....	5.0	.....	.....	.....	6.0	.....	1.0	2.0	1.0	15.0
Average number, 1892-1912, incl..	4.8	0.7	0.3	0.5	0.9	0.2	0.1	0.1	1.0	8.6

Highs.

	North Pacific.	South Pacific.	Alberta.	Plateau and Rocky Moun- tain Region.	Hudson Bay.	Total.
July, 1921.....	4.0	.....	2.0	1.0	2.0	9.0
Average number, 1892-1912, incl.....	1.3	0.3	3.0	1.2	0.6	6.6

NOTE 1.—Henceforth in plotting the paths of low pressure areas on Chart III, secondary developments will be given the designation, "A," "B," etc., in their order of appearance or development from the parent Low. Further developments from secondaries will carry the designation of the secondary and the lower case letters "a," "b," etc. in the order of occurrence.

THE WEATHER ELEMENTS.

By P. C. DAY, Climatologist and Chief of Division.

[Weather Bureau, Washington, D. C., Sept. 1, 1921.]

PRESSURE AND WINDS.

Probably the most significant feature of the atmospheric pressure distribution during the month was the persistent high pressure over the far Northwest. The pressure is normally high during the summer season over the Pacific coast districts from central California northward to Washington, but there are usually periods when it becomes relatively low, due to the passage inland of cyclonic areas from the Pacific. During July, 1921, pressure was constantly above 30 inches along the coast of Oregon and Washington, and even further inland the average for the month was the highest of record. As a result no storms entered the country from that region and local weather changes were unimportant during the entire month. Over the Southeastern States pressure was likewise higher than normal due to the extension of the North Atlantic HIGH further westward than usual into that district. This preponderance of pressure in southern districts, so persistent during the present year, and a tendency exhibited by low areas to pursue their eastward courses near the Canadian border, favored a continuation of southerly winds and warm weather over many of the central and northern districts from the Rocky Mountains eastward.

Areas of low pressure developed rather frequently over the Plateau and Great Plains districts, but they usually weakened in their eastward courses and soon disintegrated. The HIGHS entered the country mostly as weak offshoots from the permanent high area over the Pacific Northwest. As they moved slowly eastward in rather low latitudes they brought only slight daily changes in pressure, and lacked the coolness that usually attends the movement of HIGHS southward from the Canadian Provinces.

For the month as a whole pressure was above normal in all portions of the country, save locally in central California, and along the Canadian border.

As a result of the usual slight variations in pressure the winds were comparatively light, save in connection with the occurrence of thunderstorms or other types of summer storms. From the Plateau and Rocky Mountain districts eastward, the prevailing winds were from southerly points, and these directions were maintained locally over long periods. In the far West, as a result of the continued high pressure over Washington and Oregon they were mainly from northerly points.

TEMPERATURE.

In the absence of marked changes in barometric pressure during the month, temperature showed a corresponding stationary condition and there were few important changes. The persistent warmth that has marked the present year to date over much of the interior and northern parts of the country, and that became so pronounced during the latter half of June, particularly in the great central valleys, continued without a material break